

ABSTRACT

A process for thermally crystallizing a polyester polymer by introducing pellets into a liquid medium having a temperature of at least 140°C within a liquid medium zone
5 and crystallizing the submerged pellets at or above the vapor pressure of the liquid medium without increasing the molecular weight of the pellets, and while the pressure on at least a portion of the pellets is equal to or greater than the vapor pressure of the liquid medium, separating at least a portion of said pellets and at least a portion of the liquid medium from each other. The crystallization is desirably conducted in the liquid medium
10 zone without mechanically induced agitation. Optionally, the pellets are formed by an underfluid pelletizer.

There is also provided a process for thermally crystallizing solid pellets in a pipe by directing a flow of solid pellets in a liquid medium through a pipe having an aspect ratio L/D of at least 50:1, wherein the solid pellets are crystallized in the pipe at a liquid
15 medium temperature greater than the T_g of the polyester polymer.